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ABSTRACT

Many studies have verified that education beyond high school results in higher earnings. The highest earnings benefits depend upon certification or degree achievement. Not obtaining a degree results in some penalty: individuals who have some college credit but no degree earn less than associate degree holders. Professional and vocational certificate holders exhibit a wide range of salary differences. Furthermore, certain professions such as accounting afford higher earnings to those who have met state licensing requirements. According to the Bureau of Labor Statistics, the slowing growth rate of college-level jobs will likely result in 65,000 fewer college-level jobs, resulting in 18 percent more new college graduate job seekers than openings for college-level jobs. Professional specialty occupations and service occupations requiring an associate's degree rather than a bachelor's degree are targeted as the fastest-growing occupations. Technical certification of skills is of increasing importance to employers, especially when they have been involved in setting the certification standards. To function in a continually changing and global marketplace, everyone must engage in lifelong learning and skill development. One increasing trend evident in community colleges is "reverse transfer," where graduates of four-year colleges return to postsecondary education to obtain more marketable skills. (Contains 19 references.) (MN)

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Vocational Certificates and College Degrees

The employment benefits realized by workers who have achieved different educational levels—e.g., vocational certificates, associate degrees, and baccalaureate degrees—have been described in publications and supported by research data. Earnings as a function of education and other independent variables represent one category of comparison. This Digest compares the various credentials, their benefits in relation to employment, and their role in the lifelong learning patterns of career-focused individuals.

Educational Credentials

Certification. Certification of competence in the ability to perform the duties of an occupation indicates a person's achievement of predetermined standards. It offers a benchmark for assuring that the individual possesses the qualifications required for employment in a given occupation or occupational specialty. It involves learners in an educational process for achievement of competencies required by national or state regulations (e.g., teacher certification); professional associations or organizations (e.g., Certified Public Accountants [CPAs]); or industry certification (e.g., Novel Certified Engineer) (America's Learning Exchange n.d.). Certification is a nonstatutory requirement, which distinguishes it from licensure. Licensure, a more restrictive regulation, grants individuals a legal right to practice a profession given the minimum requirements established by the profession are met. It describes "who can and cannot practice a profession" (Bradley 1995, p. 1).

Associate Degrees. Employment or advancement in a specific career is the main purpose of enrollment in an associate degree program. Associate degrees are offered primarily by community and technical colleges; 75% are vocational, focusing on business technologies and health, public, and engineering technologies (Leigh and Gill 1997). Approximately 58% of the registered nursing (RN) programs in the United States, for example, are associate degree programs (Failla 1999). A 2-year program of full-time study after high school is required to receive an associate degree (Hecker 1995).

Bachelor's Degrees. Completion of a 4- to 5-year full-time academic course of study after high school is recognized by award of a college baccalaureate degree. Persons having this degree are deemed to have the qualifications that make them potential candidates for degree-requiring jobs. It is estimated that today perhaps 30% of the work force is employed in a job that by law or custom requires at least a bachelor's degree (McMenamin 1995).

Comparison of Benefits

Earnings. Many studies verify that education beyond high school results in higher earnings. Hartog (1999) reports a 5-15% rate of return in additional earnings per year of postsecondary schooling. The highest earnings benefits, however, are dependent upon certification or degree achievement. In a study of California Community College graduates, for example, the greatest earnings gains were realized by certificate completers (15% gain) and associate degree completers (11% gain) (Sanchez and Laanan 1997). The earnings reward for college graduates, in general, are the highest. "According to the March 1997 report on the Current Population Survey data, median earning for all college graduates were \$40,753 in 1996...75 percent more than the \$23,317 median for all high school graduates" (Cinca 1998, p. 2). However, not obtaining the degree results in some penalty. Men and women who have some college

credit but have not earned a degree earn less than associate degree holders (Hecker 1995).

Professional and vocational certificate holders exhibit a wide range of salary differences. For example, MDs earn more than RNs. In addition, certain professions such as accounting afford higher earnings to those who have met the state licensing requirements (e.g., CPAs), especially when the state standards for licensing are high—involving credit hours beyond 4-year degrees and experience requirements (Schaefer and Zimmer 1995). Accreditation of a program also affects certification and licensure.

Although advanced education is seen as a professional and economic advantage, a recent *Forbes* magazine article (McMenamin 1998) questions the earnings benefits of acquiring a college degree by noting that 58 members of the *Forbes* 400 either avoided college or dropped out partway through their schooling. These members, who include such noted individuals as Bill Gates, are reported to have an average net worth of \$4.5 billion, "more than twice the average net worth of those 400 members who attended Ivy League Colleges" (p. 104). The article questions why so many people seek college degrees: Is it because the course of study provides them with knowledge and skill necessary for employment in today's society or because hiring practices in government and private industry demand a college diploma?

Employment. The job market is changing. According to the Bureau of Labor Statistics, the growth rate of college-level jobs between 1996 and 2006 is expected to be lower than that of the previous 10-year period. This reduced employment growth is expected to provide 65,000 fewer college-level jobs, leaving 18% more new college graduate job seekers than there are openings of college-level jobs (Mittelhauser 1998).

Professional specialty occupations and service occupations that require an associate's degree rather than bachelor's degree, however, are targeted as the fastest growing occupations. They are expected to provide nearly half of the total job growth between 1996 and 2006 and typically require training that leads to an associate degree (Silvestri 1997). Although earnings of associate degree holders may be less than that of bachelor's degree holders, the associate degree pays off by affording graduates precise access to jobs in which they can gain experience and on-the-job training (Leigh and Gill 1997). It is estimated that the rate of return for on-the-job training is as high as 15% (Hartog 1999).

Technical certification of skills is of increasing importance to employers, especially when they have been involved in setting the certification standards. Certificates function as "open transcripts" of an individual's application of knowledge and skill over time and learning experiences (Indiana Department of Workforce Development 1998). The National Skill Standards and Assessment Collaborative, a recent project of the U.S. Departments of Labor and Education evolving from the Perkins Vocational and Applied Technology Education Act, is one effort designed to align education and industry standards to better meet the needs of students, workers, and employers (Schwager 1998). Organizations such as the National Association of Industrial and Technical Teacher Educators are working to create standards of quality for certification. They see the continuing value of skill certification for job applicants, their hiring institutions, and the clients they serve (Walker and Zirkle 1999).

Success. Although postsecondary education is seen as a good investment, Robert Rischauer of the Brookings Institute notes that, because smarter students gravitate to educational achievement, the profitability of their education is a self-fulfilling prophecy (McMenamin 1998). If sets of workers have more ability and have achieved higher educational standards, it is understandable that these are the workers employers will be willing to hire. Heckler (1998), however, suggests that learning characteristics play a large role in workplace success and may have the greatest affect on occupational choices and earnings: "Employers are willing to pay significantly higher wages to workers who can find, organize, and think with a variety of kinds of knowledge" (Ramsay 1999, p. 626).

Approaches to Lifelong Learning

Among the characteristics attributed to lifelong learning are the learning processes of engagement, investigation, speculation, trial and error (which involves risk taking), and reflection. Whether these skills are better acquired in postsecondary institutions or on-the-job corporate programs is being debated. "Right now, with all changes in the postsecondary marketplace, many institutions need crash courses in listening to markets, creating value-added programs, and identifying and assessing competence....Parties paying for the course work—employed students and their companies—can have quite definite expectations that all courses will be well-taught, within coherent curricula, leading to real-life competencies, the latter explicit and assessed" (Marchese 1999, p. 4).

To function in a continually changing and global marketplace, everyone needs to engage in lifelong learning and skill development. These efforts may take the form of postsecondary education, on-the-job training, or other types of professional development. They may also involve continued credentialing. "Nowadays it is not uncommon to find bachelor degree holders enrolled in graduate schools pursuing not the familiar master's or doctorate in a discipline, but a custom set of interdisciplinary courses aimed at competencies valued in the marketplace" (Marchese 1999, p. 4).

Careers of individuals continue to evolve, and not always in a linear fashion. The emergence of the "postbaccalaureate certificate" reflects the importance society is placing on occupational skills and certificates that reflect competence. These postbaccalaureate sequences are offered by community colleges, corporate universities, or professional societies, providing a link in the individual's career progression. "This yet-small phenomenon is a likely harbinger for wider changes in the next century. The certificate phenomenon is welcome for what it can teach the nation's universities" (ibid.).

One practice that is increasingly evident in community colleges is that of "reverse transfer" (Quinley and Quinley 1998). Countering the typical progression toward higher education that begins in the community college and leads to enrollment in a 4-year college is the college graduate who returns to postsecondary education to obtain more "marketable" skills. Most of these reentering students are older, more likely to be married, and already employed, many in professional and managerial roles. Occupational upgrading and personal interest were the main reasons for their reconnection with the educational community.

Summary

The evolutionary nature of careers, and the diverse and ongoing learning paths individuals take to realize their career goals is evident in the debate about the value of vocational certificates, associate degrees, and baccalaureate degrees. Evident in the choices one makes is the need for education to have personal value. Requiring economic investment, as well as investments of personal time and effort, continuing education after high school must be seen as critical to one's career progression.

According to the National Alliance of Business (1998), new jobs in the 21st century will require more education. Marchese (1999) rec-

ommends that educational institutions look to their corporate and for-profit competitors to see how they incorporate career-based quality improvement and assessment as a means of ensuring industry-relevant competency. In this regard, 4-year colleges, community colleges, corporate universities, professional societies, and private enterprises are all major competitors in the challenge to provide meaningful education and training to the current and future work force.

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